Abstract of the Disclosure

A traffic and capacity modeling process for a telephone network includes accessing one or more call processing platforms, copying call detail records to a database, aggregating selected sets of call parameters from the records for each dialed number by hour, date, and platform, storing the aggregated sets of call parameters in tables, and analyzing the data in the tables. The analysis of the data includes plotting the data to detect peaks of usage of the dialed numbers to thereby assess the adequacy of available telephone lines and staffing of the lines by the network customers.